

II. Amendment to the Specification:

On page 1, please replace the paragraph at lines 5-11 with the following paragraph:

BACKGROUND OF THE INVENTION

1. Field of the invention

The invention relates to the structure of security elements for documents and apparatus for examining documents provided with such security elements as well as a method of using these security elements and apparatus.

On page 1, please replace the paragraph at lines 12-16 with the following paragraph:

2. Description of the Related Art

Hitherto, documents provided with optically effective diffraction security elements are examined by complex optical examining technology. It is not possible to examine documents provided with optically effective diffraction security elements or with so-called OVD's (optically variable devices) in a document processing machine because of its high processing speed. For instance, U.S. patent 4,255,652 describes an apparatus for detecting characterizing indicia in documents provided with electrically conductive areas. A charge is transmitted to one of the electrically conductive areas by means of a first capacitive element extending across the width of, and arranged above, the document to be examined. During further transport of the document to be examined, the charged electrically conductive area moves below a second capacitive element extending across the width of the document to be examined. The charge is dissipated by the second element and an evaluation and decoding circuit generates a typical signal function.

On page 6, please replace the paragraph at lines 1-10 with the following paragraph:

OBJECTS OF THE INVENTION

~~The task~~ An object of the invention resides in eliminating the disadvantages of the prior art and, especially, ~~to complete~~ in completing the structure of security elements for documents with further security elements and to propose apparatus for examining such security elements and a

novel method of using security elements and apparatus which make it substantially more complicated, if not impossible, from the functioning of examination methods and apparatus to make conclusions in respect of the security elements in order to produce counterfeits so similar to their originals that they cannot be detected by the examining apparatus.

On page 6, please replace the paragraph at lines 11-23 with the following paragraph:

A further ~~[[task]]~~ object of the invention is to propose optically effective diffraction security elements and characteristics or OVD's which may be accurately examined quickly, independently of personal assistance and with little effort. The related apparatus for examining security characteristics are to be used in high speed document processing machines as well as in hand-held examination devices. Furthermore is it a task of the invention to fashion a plurality of the devices in accordance with the invention in such a manner that they examine a defined number of several security elements or characteristics provided on a document with the number of security elements or characteristics provided on a document with the number of security elements differing between the devices. The purpose of this task is to provide different examination techniques in keeping with the possible expense and the security elements which can be examined. ~~The task is accomplished by the following description of the invention.~~

On page 6, please replace the paragraph at lines 24 through page 7 line 6 with the following paragraph:

SUMMARY OF THE INVENTION

The structure of security elements with a metallic reflection layer for documents to be examined does not aim, prima facie, at visual inspection but at a design aiming at a method of examination. This design - hereinafter referred to as functional design - is the combination of electrically conductive and insulated structures of identical or differing size in identical or different planes with identical or differing conductivities and is fabricated from metallized structures and/or conductive inks or printing dyes. In its variegation and different constitutions,

the functional design contains coding functions in all distinguishable security elements and, hence, is capable of encrypted examination. In accordance with the invention the functional design may be an optically effective diffraction security element, or it may consist of conductive dyes or inks. Structured as an optically effective diffraction element, it may conform to the optically, i.e. visually perceptible design, or it may even assist it in its optical design.

On page 12, please replace the paragraph at lines 3-11 with the following paragraph:

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

~~The characteristics of the invention are apparent not only from the 5 claims but also from the specification and drawings, with individual characteristics constituting advantageous and patentable embodiments, either by themselves or, as sub-combinations, in connection with other embodiments, for which protection is sought hereby. Embodiments of the invention are depicted in the drawings and will be described in greater detail hereinafter in the drawings:~~

The novel features which are considered to be characteristic of the invention are set forth with particularity in the appended claims. The invention itself, however, in respect of its structure, construction and lay-out as well as manufacturing techniques, together with other objects and advantages thereof, will be best understood from the following description of preferred embodiments when read with reference to the appended drawings, in which:

On page 13, please replace the paragraph at lines 3-13 with the following paragraph:

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Each of the examples shown in Fig. 1 to 5 shows a document with security elements in accordance with the Invention, which contain a target-oriented electric code. The code is not formed by encrypting any kind of data, but, rather, by the arrangement of electrically conductive structures relative to each other or in one another and separated by non-conductive structures, electrically conductive examination indicia are arranged in a target-oriented manner the electrical

decoding of which by the examination apparatus of the invention results in a predetermined signal pattern which is compared to an already present stored signal pattern. This yields the desired high examining speed. ~~see description Fig. 14.~~

On page 13, please replace the paragraph at lines 16-30 with the following paragraph:

Fig. 1 depicts the schematic structure of a security element 1 with metallized layers 2. The metallized layers 2 are separated by an insulating zone 3. In top elevation, the insulating zone is shaped like a meander. The width of the insulating zone 3 shaped like a meander is larger than the smallest distance between two electrodes. The capacitively operating scanner 4 consists of a plurality of transmitting electrodes 5 and one receiving electrode 6 disposed in side by side relationship and a receiving antenna 6 disposed in parallel to this array. Fig. 2 depicts the schematic structure of a security element 1, in which strip-shaped metallized zones 7 and insulating strip-shaped zones 8 are alternatingly arranged in parallel relationship. The zones 7, 8 which in top elevation are strip-shaped extend either parallel to, or vertically of, the direction of document transport. The latter case is depicted in Fig. 3. The distance between two zones of the same conductivity is between 0.2 mm and 1.0 mm. The widths of the zones of the same conductivity are varying. Zones of different conductivity and different widths are also possible.

On page 14, please replace the paragraph at lines 4-7 with the following paragraph:

Fig. 5 schematically depicts a document with ~~several~~ two different security characteristics including strip-shaped metallized zones 7 and strips shaped insulating zones 8. The deliberate combination results in a further coding. This leads to increased examination of safety.